What is claimed:

1. A restraint system for vehicle, train or aeroplane, in which
- a safety belt (**1, 1a to 1e**) having two ends EL and ER consists of four belts (**1.1 to 1.4**);
- the end EL equipped with a belt retractor (**13a**) and a belt reel is arranged in the post section (pillar) or side SL of backrest (**3.2, 3.2a to 3.2d**); and
- the lower part of body (**96**) is restrained by the lap safety belt (**1.3**) and upper part of body (**95**) by the shoulder belt (**1.2**), when a latch plate (**9**) is inserted into a buckle assembly (**9.1**)

to enhance the reliability and passenger protection in the event of arbitrary real front collision or turbulence-related vibration of an aeroplane, wherein the restraint system comprises
a) a latch plate (**2**) arranged to the other end ER of shoulder belt (**1.1**);
b) a D-ring (**17**) arranged to the vehicle floor, side rail, floor or seat frame (**3.3a to 3.3d**) to deflectively loosely guide the belts (**1.1, 1.3**) and
c) a buckle assembly (**4, 4a to 4e, 14, 14a, 18, 18a, 18b**) with/without belt (**1.12**) arranged to the other side SR of backrest;
d) wherein the latch plate (**2**) is inserted;
in order to define an X-shaped safety belt by crossing the both shoulder belts (**1.1, 1.2**) over the upper part of body and to evenly distribute the yaw-acceleration Ö-dependant load $T_{ö}$, periodical load $\pm F_{Hx}$ and/or forward-motion force F_V thereto.

2. A seat-integrated restraint system equipped with belt-feeding device according to claim 1, wherein the plug-in connection of the latch plate (**2**) with assembly (**16, 16a 16b**) arranged to the backrest, post section or seat cushion makes it in resting position easier to access.

3. A restraint system equipped with belt-feeding device according to claim 1, wherein
a) a belt housing (**20.4a**) equipped with latch plate (**2**) is arranged to one end of operating arm (**20.2a**) of belt-feeding device (**20a, 20b**) manually operated or by driving unit and a guide tube (**20.1**) to the other end;
b) the guide tube (**20.1**) is pivotally attached in the backrest or supporting tube (**3.61**) of head rest (**3.6a**); and
c) the latch plate (**2**) rotated by the guide tube (**20.1**) from the resting position to the operating position is inserted into the buckle assembly (**4**);
in order to define the X-shaped safety belt.

4. A restraint system equipped with belt-feeding device according to claim 1, wherein
a) the end ER of belt (**1.1**) is arranged in the side SR of backrest; and
b) the belt (**1.1**) is located from the resting position to the operating position by translatory and/or rotatory movement of parts (**20.1, 20.2, 20.2b**) of belt-feeding device (**20, 20c, 20d**) operated manually or by driving unit;
in order to define the X-shaped safety belt.

5. A restraint system to prevent submarining in the event of front-, rear collision and/or rollover or turbulence-related vibration of an aeroplane according to at least one of preceding claims, wherein
a) the lap safety belt (**1.3**) comprising two belts (**1.3R, 1.3L**) is provided with a latch plate (**11**);
b) a buckle assembly (**7, 8, 8a to 8d**) with/without belt is arranged in or to the seat cushion (**3.1, 3.1a to 3.1d**);

c) wherein the latch plate (11) is inserted to extend the belts (1.3R, 1.3L) over left and right thigh;
in order to evenly distribute the femur-forces L_y, L_z and R_y, R_z over the lower part of body (96).

6. A restraint system to miminize the loads resulting from forward motion of passenger, yaw and/or vibration in the event of arbitrary real collision according to at least one of preceding claims, wherein the upper part of body (95) is restrained by
- a shoulder- and neck unit (10d, 10e), rotatable from the backrest and/or height-adjustable, or
- a shoulder- and neck unit (10. 10a to 10c, 10f), inserted into the backrest,

in order to evenly distribute the loads F_{Sy}, F_{Hy}, $\pm F_{Hx}$, F_{Sz}, T_δ and/or D_{Sy}, D_{Hy} over the upper part of body.

7. A restraint system according to at least one of preceding claims, wherein an energy absorber, performing work of deflection and/or friction, comprises
a) an expanding or a contracting clamping element (32, 32.1 to 32.n, 33, 33.1 to 33.n, 42, 42.1 to 42.n, 43, 43.1 to 43.n, 52, 52.1 to 52.n, 53, 53.1 to 53.n), pretensionedly arranged to or in the retaining element (31, 41, 51), and
b) the clamping element, which is frictionally guided by the retaining element and is equipped with/without sites of predetermined fracture "s".

8. A restraint system according to at least one of preceding claims, wherein on increase of load a working area with progressive characteristic is achieved by expansion or contraction of
- the cone-shaped clamping element (52, .., 52.n, 53, ...,53.n) along the cone-shaped retaining element (51); or
- reaming an expanding clamping element (42.1, ..., 42.n) upon contact with stop pin (46.1, ..., 46.n) projected through the retaining element (41) or stop element (41.3) fastened to a retaining strut (41.1).

9. A restraint system according to at least one of claims 8 and 9, wherein the contact surface of retaining element and/or of clamping element, pre-tensioned thereon,
- is machined to have friction coefficient μ_0, μ_1, μ_2, ..., μ_n; and/or
- is surrounded with soundproofing material (83).

10. A restraint system equipped with energy absorber performing no work of friction according to at least one of claims 1 to 6, wherein the strip (64.1 to 68.1) with sites of predetermined fracture "s" is attached to the seat frame (3.3, 3.3a to 3.3d) or backrest frame (3.4, 3.4a to 3.4d).

11. A restraint system equipped with energy absorber performing no work of friction according to claim 10, wherein an energy absorber (64 to 68) comprises the control-strip (64.1 to 68.1), the respective complementary strips (64.2 to 64.n, 65.2 to 65.n, 66.2 to 66.n, 67.2 to 67.n, 68.2 to 68.n) with sites of predetermined fracture "s" and the respective wires.

12. A restraint system equipped with energy absorber according to at least one of claims 1 to 9, wherein both struts of clamping element (42,..., 42.n) are provided with several pairs of adjusting holes L_1 to L_e, to one pair of which a pair of wires (47.1, ..., 47.n), whose lengths are determined, is fastened.

13. A restraint system equipped with energy absorber according to at least one of claims 1 to 9, wherein both edges f clamping element **(32, 33)** are cylinder-shaped ends **(37c, 38c)** to receive a pair of auxiliary wires **(37a, 38a)** of wire **(37, 38)** which are secured by clamping either two brackets **(37b)** to the ends of wires or the both cylinder-shaped ends to the wires.

14. A restraint system equipped with energy absorber according to at least one of claims 1 to 9, wherein the clamping element **(52, 53)** is provided with several pairs of adjusting holes L_1 to L_e, to one pair of which both ends of an auxiliary wire **(57a, 58a)** of wire **(57, 58)**, whose length is determined, are fastened by rivets **(57b, 58b)**.

15. A restraint system equipped with energy absorber according to at least one of claims 1 to 9, wherein a deformable carrier piece **(44.n)**, moving in the inner body of contracting clamping element **(43.n)** blocked by stop pin **(46.n)**, is constrainedly deformed.

16. A restraint system equipped with energy absorber according to claim 15, wherein the carrier pieces **(44, 44.1, ... 44.n)** is cone-shaped.

17. A restraint system equipped with energy absorber according to at least one of claims 15 to 16, wherein the inner diameters of contracting clamping elements **(43, 43.1, ..., 43.n)** and outer diameters of carrier pieces **(44, 44.1, ... 44.n)** are governed by the equation $d_i < d_a < d_{i1} < d_{a1} < .... < d_{in} < d_{an}$, where d_{ii} = inner diameter of clamping element **(43.i)** and d_{ai} = largest diameter of carrier piece **(44i)**.

18. A restraint system equipped with energy absorber according to at least one of preceding claims, wherein the row of energy absorbers **(R42, R43)** comprises a single retaining element **(41)** and a row of

- expanding clamping elements **(42, 42.1, ..., 42.n)** connected to each other by wires **(47, 47.1, ..., 47.n)**; *or*
- contracting clamping elements **(43, 43.1, ..., 43.n)**, strips **(64.1,.., 64.m)** and/or carrier pieces **(44, 44.1, ... 44.n)** connected to each other by wires **(48, 48.1, ..., 48.n)**.

19. A restraint system equipped with energy absorber according to claim 18, wherein the set of energy absorbers **(30, 40, 50)**, comprising energy absorbers **(R32 and R33, R42 and R43, R52 and R53)**, is attached to the seat frame **(3.3, 3.3a to 3.3d)** or backrest frame **(3.4, 3.4a to 3.4d)**.

20. A restraint system according to at least one of preceding claims, wherein the stored energy of the clamping element, carrier piece, strip, spring **(10.9)** or guide plate **(13.3)** is released by fracture of the sites of predetermined fracture "s" and/or excess of yield limit

21. A restraint system according to at least one of claims 18 to 20, wherein the retaining element **(51, 41a, 31c, 51c)** serves as

- main girder **(51)** of backrest frame **(3.4a)**,
- seat rail **(41a)** of seat frame **(3.3a)**;or
- seat leg **(31c, 51c)** of seat frame **(3.3c)**.

22. A restraint system according to at least one of claims 18 to 20, wherein the side girder **(3.40a, 3.40b)**, consisting of the retaining elements **(31a to 31e, 41c)** and respective parts **(3.41a, 3.43a, 3.43b, 3.44b)**, is made of one piece.

23. A restraint system according to claim 22, wherein the energy absorber **(50b)** is attached to the parts **(3.41a, 3.43a, 3.43b, 3.44b)** of side girder **(3.40a, 3.40b)**.

24. A restraint system according to at least one of preceding claims, wherein the retaining element (31e) is provided with a hole, through which a wire (38e) is led from inside to outside thereof.

25. A restraint system according to at least one of claims 22 to 24, wherein the backrest frame (3.4c, 3.4d) is defined by a base frame (3.45a), both side girders (3.40a, 3.40b), rollover tubes (20.2b), angle fittings (26, 26a) and four fixing pins (3.31a, 3.31b) in form- and/or force-locking connection to each other.

26. A restraint system according to at least one of preceding claims, wherein the buckle assembly (4a, 4b) in plug-in connection with latch plate (2) comprises
- a housing of buckle assembly having two openings in which the engaging parts (4.10a, 4.10b) of guide piece (4.7a, 4.7b), fastened to the seat- or backrest frame, are inserted till both clamping parts (4.12) engage with clamping holes (4.13);
- a release cable (4.2) with wire (4.3) or an electrical motor (4.2b) with driving shaft (4.3b), where the part (4.3, 4.3b), being actuated, withdraws the release button (84a, 84b) to disconnect the latch plate (2) therefrom; and
- a coupling member (1.2a, 1.2b) of a tie band (1.1a, 1.1b) guided by the guide piece.

27. A restraint system according to claim 26, wherein the engaging part (4.10a, 4.10b) has a minimum length of T_L to preserve the form-locking connection with buckle assembly (4a, 4b) of length T_S during unloading and loading the strip to the starting threshold value ΔF_1.

28. A restraint system according to at least one of claims 26 to 27, wherein the tongue of latch plate (2) is prolonged to T_Z to exploit the whole depth T of seat cushion or of backrest.

29. A restraint system according to at least one of claims 26 to 28, wherein the tongue of latch plate (2) is prolonged to T_Z to exploit the whole depth T of seat cushion or of backrest.

30. A restraint system according to at least one of claims 1 to 25, wherein the end ER of belt (1.1) at the side SR of backrest is provided with
- the coupling member (1.2a); *or*
- a belt reel (13) in force-locking connection with a tie band (1.1b), having coupling member (1.2b), a guide plate (13.3) fastened to the backrest frame by bolts (13.1), great washers (13.2) and nuts (13.4).

31. A restraint system according to claim 30, wherein the guide plate (13.3) is provided with fracture of the sites of predetermined fracture "s" and oblong holes (13.5) to loosely guide the bolts (13.1).

32. A restraint system according to at least one of preceding claims, wherein the belt-feeding device (20c, 20d) comprises
- a threaded spindle (20.1a) fastened to both angle fittings (26a);
- rollover tubes (20.2b) of backrest frame (3.4d) to guide the belt housing (20.4c, 20.4d) equipped with electrical motor (20.5) which, when activated, moves along the threaded spindle to position the belt (1.1) loosely guided by the belt housing from the resting position to the operating position, or reversely; and
- a coupling member (1.2a) or coupling member (1.2b) with energy-absorbing belt reel (13).

33. A restraint system according to claim 32, wherein a r tatable mechanism of device (20d) comprises
- an operating arm (20.2), to one end of which a belt ring (20.8) is rigidly attached to loosely guide the belt (1.1) and to the other end of which a guide tube (20.1) which is pivotally attached in the bearing case (20.10) of backrest frame; and
- a driving unit, when activated, to rotate the operating arm (20.2) with belt (1.1), where the rotation of the operating arm is synchronized with the translatory movement of belt housing (20.4d).

34. A restraint system according to at least one of claims 32 to 33, wherein the belt housing (20.4d) is provided with a safety bracket (20.6) which engages to the holes of front rollover tube (20.2b) and belt housing (20.4d) in excess of threshold value in the event of rollover to clamp the belt (1.1) and to block the translatory movement of the belt housing.

35. A restraint system according to at least one of claims 1 to 31, wherein the belt-feeding device (20) comprises
- an operating arm (20.2), to one end of which a belt ring (20.8) is rigidly attached to loosely guide the belt (1.1) and to the other end of which a guide tube (20.1), pivotally attached to the bearing case (20.10) of backrest frame, which is rotated and/or countersunk in the backrest by a driving unit; and
- a belt-feeding plate (20.9, 20.9a) to hold the belt (1.1) over the head rest (3.6) during the rotation; and

where the parts are countersunk in the backrest in resting and operating position and, when activated, the driving unit performs the following operating cycles from the resting position to the operating position: upward-movement of guide tube and belt-feeding plate until over the head rest, rotation of operating arm with belt (1.1) to insert into the hole of belt-feeding plate, downward-movement and countersink of the parts (20.1, 20.2, 20.8, 20.9 or 20.9a) in the backrest in operating position, finally, deactivation of the driving unit.

36. A restraint system according to claim 2, wherein the belt-feeding device (20a, 20b) is provided with a driving unit, radially length-adjustable part (20.3) and/or height-adjustable belt housing (20.4a) having latch plate (2).

37. A restraint system according to claim 36, wherein the buckle assembly (4, 14, 18) and the belt guide (5b) are height-adjustable by moving the handle (5.2).

38. A restraint system according to at least one of preceding claims, wherein the height- and width-adjustable mechanism (27) comprises
- a pair of tubes (27.1) of backrest frame having a plurality of locking slots, one pair of which is engaged to locking handle (27.5);
- a block (29) consisting of a pair of tubes (27.2), movable along the tubes (27.1), a connecting part of all tubes (27.2, 27.3) and a pair of outer tubes (27.3) in which the inner tubes (27.4) is movable, pre-loaded by springs (27.6) in co-operation with parts (27.7 to 27.9) and form- and force-locking connected to locking handle (27.5);
- a plurality of locking slots q, r, s etc. arranged along one of the outer tubes (27.3); and
- a buckle assembly (18.3, 19.3) consisting of a buckle assembly (4c), to connect with the latch plate, and a housing (18.12) form-locking connected to the buckle assembly, movable along the outer tubes (27.3) and latchable by spring (18.5) pre-loaded pawl (18.10) engaged to the locking slot r and disengaged by pulling of the pawl to adjust to the width of backrest.

39. A restraint system according to at least one of claims 1 to 37, wherein the height- and width-adjustable mechanism (27a) comprises
- two pairs of tubes (27.1) of backrest frame having a plurality of locking slots, two pairs of which are engaged to both locking parts (27.5, 27.10) coupled to each other;
- a block (29a) consisting of a pair of connecting parts of all tubes, a pair of tubes (27.2) movable along the tubes (27.1) and a pair of outer tubes (27.3) wherein the inner tubes (27.4) move, which are pre-loaded by springs (27.6) in co-operation with parts (27.7a, 27.8, 27.9a, 27.11) and form- and force-locking connected to locking parts (27.5, 27.10);
- a plurality of locking slots q, r, s etc. arranged along one of the outer tubes (27.3); and
- two buckle assemblies (18.3, 19.3), whereof each assembly consists of a buckle assembly (4c), to connect with the latch plate, and a housing (18.12) form-locking connected to the buckle assembly, movable along the outer tubes (27.3) and latchable by spring (18.5) pre-loaded pawl (18.10) engaged to the locking slot r and disengaged by pulling of the pawl to adjust to the width of backrest.

40. A restraint system according to claim 38 or 39, wherein one end of tie band (1.5, 1.6) inserted through the hole of housing (18.12) of buckle assembly (4c) is fastened together and the other end thereof to coupling member (1.2b).

41. A restraint system according to at least one of preceding claims, wherein the shoulder- and/or neck-unit (10, 10a to 10f) comprises
- a pair of shoulder-shaped caps (10.2, 10.2a to 10.2f);
- a pair of neck-shaped caps (10.4, 10.4b);
- neck-shaped cap (10.4a, 10.4c);
- a pair of shoulder-shaped energy absorbers (10.3);
- a pair of neck-shaped energy absorbers (10.5);
- neck-shaped energy absorber (10.5a); *and/or*
- connecting cap (10.11).

42. A restraint system according to claim 41, wherein the chin support of energy absorber (10.5a) in the neck-shaped cap (10.4a) is shaped wider to serve as cervical collar.

43. A restraint system according to at least one of claims 41 to 42, wherein the energy absorber (10.3, 10.5, 10.5a) is detachable from the cap and fastenable thereto by means of adhesive fastener such as zip-, snap-in-, Velcro fastener.

44. A restraint system according to at least one of claims 41 to 43, wherein the latch plate (10.1, 10.1b, 10.1f) with/without spring (10.9) is fastened to the flange (10.12, 10.12c, 10.12f) of cap (10.2, 10.2a to 10.2c, 10.2f) by connecting elements (10.6, 10.6a, 10.6b, 10.7, 10.8).

45. A restraint system according to claim 44, wherein the cap (10.2a, 10.2f) is width-adjustable by rotation of the bolt (10.7, 10.6a) in the threaded hole of flange (10.12, 10.12f).

46. A restraint system according to at least one of claims 41 to 43, wherein the unit (10d, 10e) is attached
- in the backrest or to the upper part thereof in the resting position and
- about the upper part of body in the operating position by a pair of rotating levers (2°.5, 28.5a) and/or a pair of blocks of rotatable device (28, 28a) moved along the auxiliary tubes (71, 72) of backrest frame.

47. A restraint system according to claim 46 wherein the rotatable device (28) comprises

- a pair of blocks, each of which consists of two tubes (**28.1, 28.2**), connected to each other by connecting member (**28.3**), and an L-shaped plate (**28.4**);
- a pair of rotating levers (**28.5**), connected to each other by shaft (**28.7**), where the end of each lever is loosely guided between plate (**28.4**) and the connecting member (**28.3**) and the cap (**10.2d**) and a release cam (**28.6**) are fastened to the other end thereof;
- a pair of stop pieces (**28.9**) to retain the rotating levers in resting position; and
- a pair of parts (**28.8, 28.10 to 28.13**);

when the rotating levers (**28.5**) are rotated manually or by driving unit, both release cams (**28.6**) force the blocking levers (**28.8**), pre-loaded by springs (**28.10**), to release the locking pins (**28.12**), pre-loaded by springs (**28.13**) and loosely guided in the tubes (**28.11**), thereby protruding in the holes (**28.14**) and resulting in blocking the rotating levers and unit (**10d**).

48. A restraint system according to claim 46, wherein the rotatable device (**28a**) comprises
- a pair of blocks, each block consists of two retaining elements (**41e, 41f**), connected to each other by connecting member (**28.3**), and an L-shaped, partly laterally open and partly laterally closed plate (**28.4a**);
- a pair of rotating levers (**28.5a**) connected to each other by shaft (**28.7**), where the end of each lever is loosely guided between plate (**28.4a**) and the connecting member (**28.3**) and the cap (**10.2e**) and a release cam (**28.6a**) are fastened to the other end thereof;
- a pair of stop pieces (**28.9a**) to retain the rotating levers in resting position and to deflectively guide the wires (**47e, 47f**);
- a pair of parts (**28.8a, 28.10a, 28.11 to 28.13**); and
- a pair of sets of energy absorbers (**40e, 40f**);

when the rotating levers (**28.5a**) are rotated manually or by driving unit, both release cams (**28.6a**) force the blocking levers (**28.8a**), pre-loaded by springs (**28.10a**), to release the locking pins (**28.12**), pre-loaded by springs (**28.13**) and loosely guided in the tubes (**28.11**), thereby protruding in the holes (**28.14**) and resulting in blocking only in one rotating direction the rotating levers and and unit (**10e**), which, in response to forward motion of passenger, rotate in the other rotating direction through the opening of the plates (**28.4a**) to absorb energy by the energy absorber (**10.3, 10.5**) and sets of energy absorbers (**40e, 40f**).

49. A restraint system according to claim 47 or 48, wherein the cap (**10.2d, 10.2e**) recessed about the supporting tube (**3.61**) of head rest (**3.6a**) is reinforced by reinforcing plate (**10.13**).

50. A restraint system according to at least one of claims 41 to 49, wherein the belt (**1.1**) is loosely guided by
- projecting through a closed aperture of cap (**10.2**) and a closed aperture of latch plate (**10.1**);
- extending over a U-shaped plate (**10.15**) of cap (**10.2e**); *or*
- extending over an open aperture (**10.14**) of cap (**10.2b, 10.2c**) and an open aperture of latch plate (**10.1b**).

51. A restraint system according to claim 50, wherein the belt extending over an aperture of latch plate (**10.1b**) or a U-shaped plate (**10.15**) is loosely locked by quick-release pin (**10.10**) and released by withdrawal thereof.

52. A restraint system according to at least one of preceding claims, wherein the belt (1.1) of belt-feeding device (20, 20a to 20d) and/or the unit (10d, 10e) is/are positioned from the resting position to the perating position by at least one driving unit via
- actuating an existing switch such as switch for light or touching a switch; *or*
- pressing x-times, e.g. two-times on the master release button (84) of buckle assembly (9.1);
- activating a switch built in the buckle assembly (9.1) upon contact with a cam of latch plate (9) inserted therein; *or*
- starting a motor in response to activating a door switch when closing the vehicle door or a pressure sensor on the seat when sitting thereon.

53. A restraint system according to claim 52, wherein at the operating position the driving unit is switched off by
- touching a switch built in the buckle assembly (4, 4a, 4b) upon inserting the latch plate (2) therein; *or*
- a control device activated in excess of the time limit.

54. A restraint system according to at least one of preceding claims, wherein the belt (1.1) and/or unit (10d, 10e) is/are put back from the operating position to the resting position in excess of an operating time set for the purpose of inserting the latch plate (9) in the buckle assembly (9.1).

55. A restraint system according to at least one of preceding claims, wherein upon pressing on the master release button (84) of buckle assembly (9.1)
- all latch plates are disengaged from buckle assemblies; *and/or*
- at least one driving unit
  * of belt-feeding device (20, 20a to 20d) pulls back the belt (1.1); *and/or*
  * of rotatable device (28, 28a) moves back the unit (10d, 10e)

  from the operating position to the resting position.

56. A restraint system according to at least one of preceding claims, wherein the belt (1.1) in resting position is intercepted by belt-catching member (20.7, 20.7a).

57. A restraint system equipped with energy-absorbing management according to at least one of preceding claims, wherein the energy-absorbing management comprises:
a) wires of elements, such as clamping elements, carrier pieces and/or strips of each row of energy absorbers (R32, R33, R42, R43, R52, R53), are tightly, less tightly and/or loosely connected to each other;
b) wires (47, 48, 57, 58, 74 to 78) of the sets of energy absorbers (30, 40, 50, 64 to 68) are tightly, less tightly and/or loosely connected to coupling member (1.2a, 1.2b);
c) an adult- and/or a child-related starting threshold value ΔF_1 and the injury-irrelevant threshold values ΔF_i, with increment i from 2 to n, in dependence on weight groups, where the values are below the respective injury-relevant loads and load limit of safety belt for the purpose of releasing subenergies by fracture of the elements of energy absorbers;
d) at least one strip (64.1 to 68.1) and/or at least one pair of energy absorbers (10.3, 10.5, 10.9) subjected to the deformation to the level of starting threshold value ΔF_1; and
e) at least one control-clamping element (32, 33, 42, 43, 52, 53) to perform work of friction and of deflection during the energy absorption by fracture of the remaining clamping elements of its set of energy absorbers, however, just before all the clamping elements and/or the control-clamping element are broken to release their stored energies, at least one other control-clamping element, at least one other set of energy absorbers and/or at

least one energy absorber (10.3, 10.5, 10.9, 13.3) are responsible for energy absorption, where the cycle of releasing subenergy at its level of threshold value ΔF_i with increment i from 2 to n is terminated on absorption of the total energy F_n.

58. A seat-integrated restraint system equipped with energy-absorbing management for vehicle, train and aeroplane according to at least one of preceding claims, wherein the restraint system (1, 1a to 1d) equipped with energy-absorbing management and the seat (3, 3a to 3d) are integrated into a compound by

- disposing the unit (10a), which serving as front portion of seat cushion (3.1a) is released therefrom upon pressing on the release button (87a), over the upper part of body of the child and manually inserting the latch plates (2, 5c, 9, 11, 25) of 11-point-safety belt (1a) into the buckle assemblies (4, 7, 8b, 9.1, 18a, 18b, 19a, 19b) to convert into a child-seat (85a) and to exploit the space for accommodation of both lower legs of a child sitting on the rear portion;
- folding the backrest (3.2a) in operating position to convert the child-seat (85a) into a baby-cot (86);
- disposing the unit (10b), which is released from the seat cushion (3.1b) upon pressing on the release button (87b), over the upper part of body of the child and manually inserting the latch plates (2, 9, 11, 25) of 9-point safety belt (1b) into the buckle assemblies (4a, 8a, 9.1, 18a, 19a) to convert into a child-seat (85b);
- operating manually and by belt-feeding device (20) to insert the latch plates (2, 9, 11, 25) of 7-point-safety belt (1c), extending over a passenger, into the buckle assemblies (4b, 8d, 9.1, 18.3, 19.3) in association with adapting to the upper part of body (95) via the width- and/or height-adjustment of mechanism (27a) to convert into a safety seat (3); *or*
- belt-feeding device (20d) to feed the belt (1.1) into operating position, by rotating the unit (10d, 10e) and operating to insert the latch plates (9, 11) of 7-point-safety belt (1c), extending over a passenger, into the buckle assemblies (8, 9.1) to convert into a safety seat (3d).

59. A restraint system according to at least one of preceding claims, characterized by use of metal, compound material, glass fibre reinforced material or non-metal material for material of tie band, coupling members, guide piece, energy absorber, the parts of set of energy absorbers, belt-feeding device. height- and width-adjustable mechanism as well as shoulder- and neck-unit.